What is claimed is:

1. A laser apparatus comprising:

a block;

a plurality of laser diodes respectively having light-emission points and being fixed to said block so that the light-emission points are aligned along a direction; and

a collimator-lens array integrally formed to contain a plurality of collimator lenses which are arranged along a direction and respectively collimate laser beams emitted from said plurality of laser diodes;

wherein said block has a lens-setting surface which is flat, perpendicular to optical axes of said plurality of laser diodes, and located on a forward side of said plurality of laser diodes at a predetermined distance from said light-emission points, and said collimator-lens array is fixed to said block so that an end surface of the collimator-lens array is in contact with said lens-setting surface.

2. A laser apparatus according to claim 1, wherein said lens-setting surface has a flatness not greater than 0.5 micrometers.

3. A laser apparatus according to claim 1, wherein said block has a laser fixation surface on which said plurality of laser diodes are fixed, and the laser fixation surface has a flatness not greater than 0.5 micrometers.

4. A laser apparatus according to claim 1, wherein said plurality of laser diodes are realized by a multicavity

laser-diode chip having a plurality of light-emission points.

5. A laser apparatus according to claim 1, wherein said plurality of laser diodes are realized by a plurality of multicavity laser-diode chips each having a plurality of light-emission points.

6. A laser apparatus according to claim 1, wherein said plurality of laser diodes are realized by a plurality of single-cavity laser-diode chips each having a single light-emission point.

7. A laser apparatus according to claim 1, wherein each of said plurality of laser diodes is realized by a nitride-based compound laser-diode chip,

said block is a heat-dissipation block made of copper or copper alloy,

said laser apparatus further comprising a plurality of submounts which are made of a material having a thermal expansion coefficient of 3.5 to 6.0 X 10^{-6}/°C, have a thickness of 200 to 400 micrometers, and are separately formed on said heat-dissipation block,

each of said plurality of laser diodes and said plurality of submounts has a bonding surface, and

each of said plurality of laser diodes is junction-side-down mounted on one of said plurality of submounts in such a manner that the bonding surface of said each of the plurality of laser diodes is bonded to the bonding surface of said one of the plurality of submounts through a

metalization layer and an Au-Sn eutectic solder layer each of which is divided into a plurality of areas.

8. A laser apparatus according to claim 7, wherein each of said plurality of laser diodes contains a light emission region, and said metalization layer and said Au-Sn eutectic solder layer are separated by a groove which is arranged immediately below the light emission region.

9. A laser apparatus according to claim 7, wherein said plurality of submounts are made of AlN.

10. A laser apparatus according to claim 7, wherein said plurality of submounts are bonded to the heat-dissipation block with Au-Sn eutectic solder.

11. A laser apparatus comprising:

a plurality of blocks stacked in a plurality of layers;

a plurality of laser diodes respectively having light-emission points and being fixed to said plurality of blocks so that the light-emission points are aligned in said plurality of layers in each of which more than one of the light-emission points are aligned along a predetermined direction; and

a plurality of collimator-lens arrays arranged in correspondence with said plurality of layers, each of the plurality of collimator-lens arrays is integrally formed to contain a plurality of collimator lenses which are arranged along said predetermined direction, and the plurality of

collimator lenses in the plurality of collimator-lens arrays respectively collimate laser beams emitted from said plurality of laser diodes;

wherein said plurality of blocks respectively have lens-setting surfaces, said lens-setting surfaces are flat, perpendicular to optical axes of said plurality of laser diodes, and located on a forward side of said plurality of laser diodes at a predetermined distance from said light-emission points, and said plurality of collimator-lens arrays are fixed to said plurality of blocks so that end surfaces of the plurality of collimator-lens arrays are respectively in contact with said lens-setting surfaces.

12. A method for producing a laser apparatus including a block, a plurality of laser diodes respectively having light-emission points and being fixed to said block so that the light-emission points are aligned along a direction, and a collimator-lens array integrally formed to contain a plurality of collimator lenses which are arranged along a direction and respectively collimate laser beams emitted from said plurality of laser diodes; said method comprising the steps of:

(a) forming in said block a reference surface which is flat, perpendicular to optical axes of said plurality of laser diodes, and located on a forward side of locations at which said plurality of laser diodes are fixed to the block;

(b) adjusting a position of each of said plurality

of laser diodes in a direction parallel to said optical axes based on information obtained by measurement of a focal length of one of the plurality of collimator lenses corresponding to said each of said plurality of laser diodes, and fixing said each of the plurality of laser diodes at the adjusted position; and

(c) adjusting positions of said plurality of collimator lenses along said reference surface, and fixing the plurality of collimator lenses at the adjusted positions.

13. A laser apparatus comprising:

a block;

a plurality of laser diodes respectively having light-emission points and being fixed to said block so that the light-emission points are aligned along a direction; and

a plurality of collimator lenses which are arranged along a direction and respectively collimate laser beams emitted from said plurality of laser diodes;

wherein said block has a reference surface which is flat, perpendicular to optical axes of said plurality of laser diodes, and located on a forward side of portions of said block to which said plurality of laser diodes are fixed,

each of the plurality of laser diodes is fixed to said block in such a manner that a position of said each of the plurality of laser diodes in a direction parallel to said optical axes is adjusted based on a focal length of one of the plurality of collimator lenses corresponding to said each of

the plurality of laser diodes, and

said plurality of collimator lenses are fixed to said reference surface in such a manner that positions of the plurality of collimator lenses are adjusted along said reference surface.

14. A laser apparatus according to claim 13, wherein said block is a heat-dissipation block, said plurality of laser diodes are junction-side-down mounted on a plurality of submounts, and said plurality of submounts are arranged on said block so that said light-emission points are aligned along a line.

15. A laser apparatus according to claim 14, wherein each of said plurality of laser diodes has a visible feature indicating a position of emission at a front end of said each of said plurality of laser diodes, and said plurality of laser diodes and said plurality of submounts are arranged so that said visible feature can be viewed from a submount side.

16. A fiber module comprising:

an optical fiber;

a support member for supporting an end portion of said optical fiber;

a light source; and

an optical system which makes light emitted from said light source enter said optical fiber from an end face of the optical fiber;

wherein said optical fiber is bonded to said

support member with a thin layer of an ultraviolet-light-curing type adhesive.

17. A laser apparatus according to claim 16, wherein said support member is optically transparent.

18. A laser apparatus according to claim 16, wherein said optical fiber is a multimode optical fiber, said light source is realized by a plurality of laser diodes, and said optical system is an optical condensing system which collects laser beams emitted from the light source, and makes the collected laser beams enter said optical fiber.

19. A laser apparatus according to claim 18, wherein said plurality of laser diodes are arranged so that light-emission points of the plurality of laser diodes are aligned along a line parallel to active layers of the plurality of laser diodes, said optical condensing system comprises a plurality of collimator lenses and a condensing lens, said plurality of collimator lenses are respectively provided in correspondence with said plurality of laser diodes, collimate laser beams emitted from the plurality of laser diodes, and each have a first aperture diameter in a direction parallel to said line and a second aperture diameter in a direction perpendicular to said line and greater than the first aperture diameter, and said condensing lens collects the laser beams collimated by the plurality of collimator lenses, and makes the collimated laser beams converge on said end face of the optical fiber.

20. A laser apparatus according to claim 19, wherein said plurality of collimator lenses are integrally formed into a lens array.

21. A laser apparatus according to claim 18, wherein said plurality of laser diodes are mounted on a plurality of blocks which are joined.

22. A laser apparatus according to claim 18, wherein said multimode optical fiber has a core diameter not greater than 50 micrometers and a numerical aperture not greater than 0.3.

23. A laser apparatus according to claim 18, wherein said multimode optical fiber has a core diameter and a numerical aperture, and the core diameter multiplied by the numerical aperture is not greater than 7.5 micrometers.

24. A laser apparatus according to claim 18, wherein said plurality of laser diodes are fixed so that the plurality of laser diodes are two-dimensionally arranged when viewed from a laser-receiving side.

25. A fiber module comprising a plurality of laser units each of which includes:

a multimode optical fiber;

a support member for supporting an end portion of said multimode optical fiber;

a plurality of laser diodes; and

an optical condensing system which collects laser beams emitted from the light source, and makes the collected

laser beams enter said multimode optical fiber from an end face of the optical fiber;

wherein said multimode optical fiber is bonded to said support member with a thin layer of an ultraviolet-light-curing type adhesive.

26. A fiber module according to claim 25, wherein said multimode optical fiber in the plurality of laser units is arranged to constitute a one-dimensional array or a bundle at least at a light-emitting end of the multimode optical fiber.